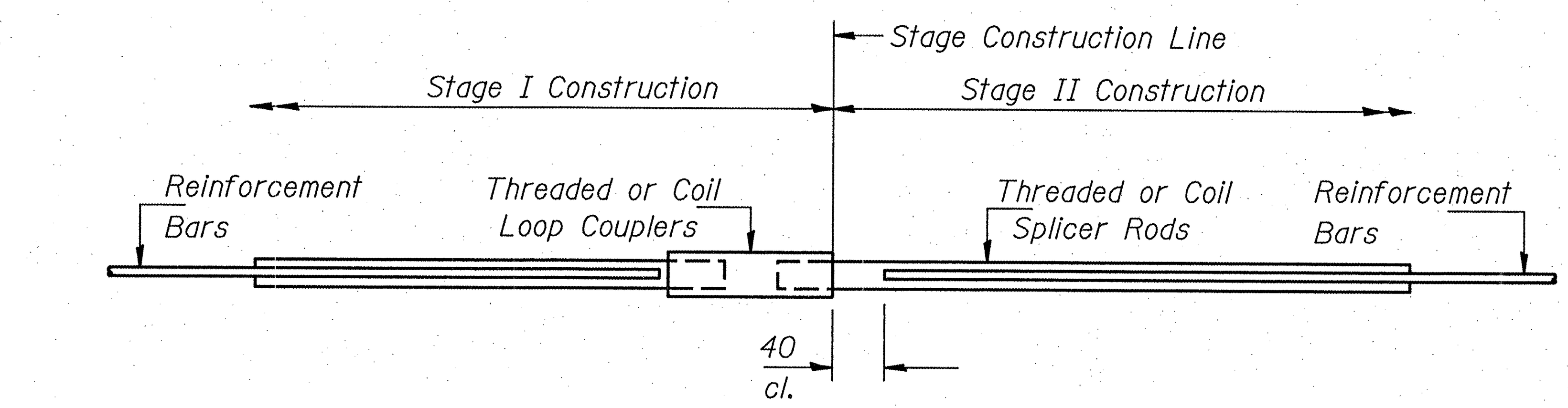
92656

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

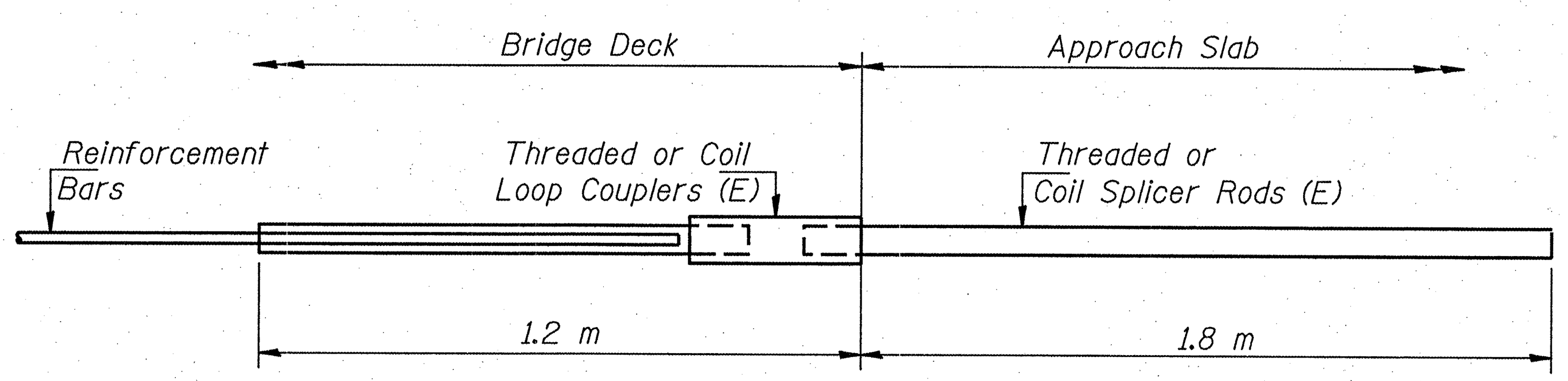
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A.			200	113
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 4
5 SHEETS



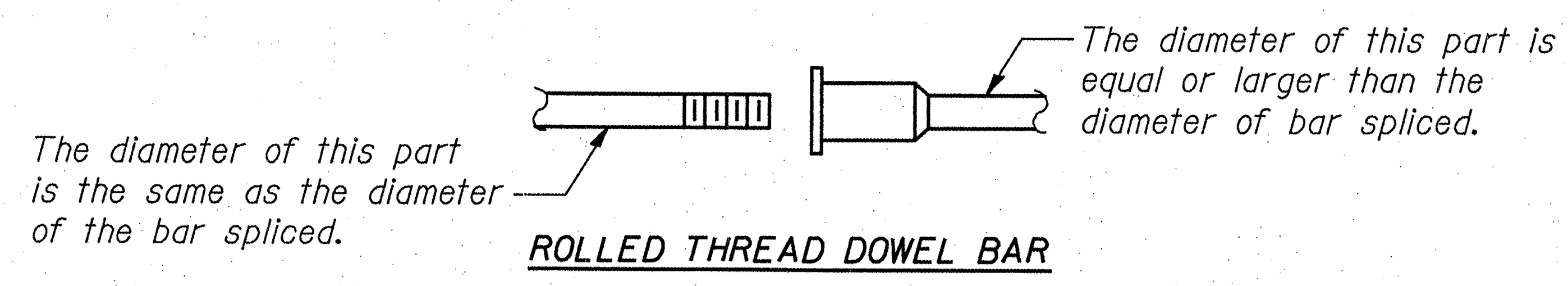
BAR SPLICER ASSEMBLY DETAIL

Bar Size	No. Assemblies Required	Location
#16	40	Top Slab
#16	44	Bottom Slab
#19	42	Walls

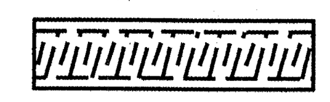


INTEGRAL ABUTMENT BAR SPLICER ASSEMBLY DETAIL FOR #15 BAR

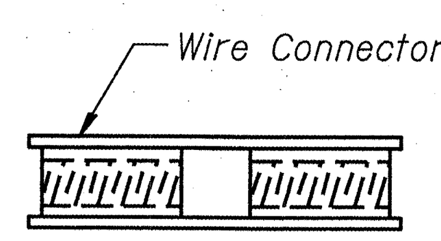
Min. Capacity = 100 kN - tension
Min. Pull-out Strength = 40 kN - tension
No. Required =



ROLLED THREAD DOWEL BAR



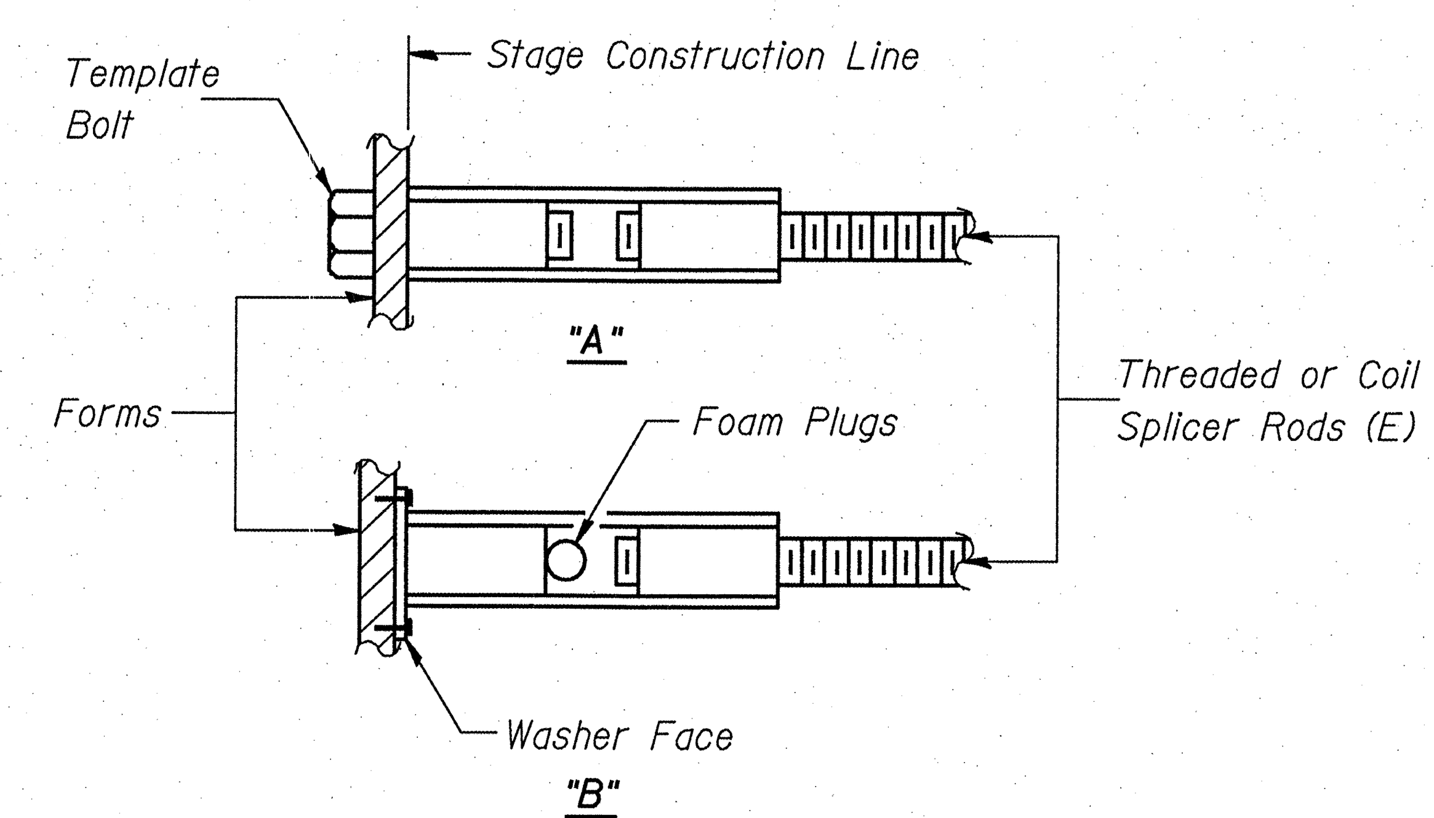
** ONE PIECE



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563M, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 400 MPa yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kN) $= 1.25 \times 10^{-3} \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kN) $= 1.25 \times 10^{-3} \times fs_{allow} \times A_t$

Where fy = Yield strength of lapped reinforcement bars in MPa.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in MPa (Service Load)
A_t = Tensile stress area of lapped reinforcement bars (mm^2).
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kN - tension	Min. Pull-Out Strength kN - tension
#13	510 mm	68	27
#16	610 mm	102	41
#19	790 mm	147	59
#22	1.04 m	201	80
#25	1.37 m	262	105

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

All dimensions are in millimeters (mm) except as noted.

BAR SPLICERS
DOUBLE BOX CULVERT
IL RTE 78 OVER CREEK
F.A.P. RTE 614 SECTION 147B
MORGAN COUNTY
STATION 18+664.055
S.N. 069-C151

DESIGNED DDB	RANDOLPH & ASSOCIATES, INC.	FILE NUMBER 136.080
CHECKED JFJ	911 W. PIONEER PARKWAY, PEORIA, IL 61615-2124	
DRAWN JDB	TEL.309-693-8844 FAX.309-693-8655 *1-800-831-9221 HTTP://WWW.RANDOLPHINC.COM	DATE Dec. 23, 2003
CHECKED DDB	CONSULTING ENGINEERS • LAND SURVEYORS	

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